

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant : Gaston, *et al.*  
App. No. : 10/825,230  
Filed : April 16, 2004  
For : BITUMINOUS FROTH INLINE  
STEAM INJECTION PROCESSING  
Examiner : Nina Bhat  
Art Unit : 1797  
Conf # : 7777

**CERTIFICATE OF EFS WEB  
TRANSMISSION**

I hereby certify that this correspondence, and any other attachment noted on the automated Acknowledgement Receipt, is being transmitted from within the Central Time zone to the Commissioner for Patents via the EFS Web server on:

January 9, 2009

(Date)



Umair A. Qadeer, Reg. No. 54,380

**REQUEST TO WITHDRAW ERRONEOUS HOLDING OF ABANDONMENT**

Mail Stop AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This paper is being submitted to request withdrawal of an erroneous holding of abandonment of U.S. Patent Application No. 10/825,230.

An Office Action issued in this case on June 20, 2008. Under 37 C.F.R. §§ 1.134-1.136, a response to the Office Action could be timely filed on or before December 20, 2008 with the payment of a three-month extension fee. Under 35 U.S.C. § 21(b), since December 20, 2008 was a Saturday, a response to the Office Action could still be timely filed on or before Monday December 22, 2008. A response to the Office Action was filed on December 22, 2008 with the payment of the three-month extension of time fee. Copies of the response, electronic patent application fee transmittal, and electronic acknowledgement receipt generated upon submission of the response to the USPTO are attached. All of these documents appear in the USPTO's PAIR database as having been timely filed on December 22, 2008. Thus, the response was timely filed and the Notice of Abandonment that issued on December 24, 2008 issued in error. Applicants thus request withdrawal of the erroneous holding of abandonment.

**Application No.:** 10/825,230  
**Filing Date:** April 16, 2004

No fees are believed to be due with this Request. Please charge any fees, including any fees for extensions of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 1/9/09

By: Umair A. Qadeer  
Umair A. Qadeer  
Registration No. 54,380  
Attorney of Record  
Customer No. 20995  
(949) 760-0404

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

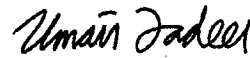
Applicant : Gaston, *et al.*  
App. No : 10/825,230  
Filed : April 16, 2004  
For : BITUMINOUS FROTH INLINE  
STEAM INJECTION PROCESSING  
Examiner : Nina Bhat  
Art Unit : 1797  
Conf # : 7777

**CERTIFICATE OF EFS WEB  
TRANSMISSION**

I hereby certify that this correspondence, and any other attachment noted on the automated Acknowledgement Receipt, is being transmitted from within the Central Time zone to the Commissioner for Patents via the EFS Web server on:

December 22, 2008

(Date)



Umair A. Qadeer, Reg. No. 54,380

**AMENDMENT AND RESPONSE TO OFFICE ACTION****Mail Stop AMENDMENT**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

In response to the non-final Office Action mailed on June 20, 2008, Applicants respectfully submit the following amendments and remarks:

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

**Remarks/Arguments** begin on page 7 of this paper.

### AMENDMENTS TO THE CLAIMS

Without prejudice, please amend the claims as reflected in the following listing of claims, which will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) Apparatus for heating a bitumen froth by steam, the apparatus comprising:

~~a heater~~ an injector body comprising a bitumen froth inlet for receiving the bitumen froth, a steam inlet for receiving the steam, and ~~a mixture~~ an injector outlet; and

a static mixer body having first and second spaced ends and forming an enclosed passageway extending between the first and second ends, wherein the first end is in communication with the ~~mixture~~ injector outlet, the static mixer body supporting a plurality of baffles disposed within the enclosed passageway to effect a mixing action of ~~material~~ the bitumen froth and the steam flowing through the enclosed passageway thereof to form a heated feed;

wherein the steam inlet is disposed to inject the steam into the ~~heater~~ injector body towards the enclosed passageway in a direction generally parallel to ~~the~~ a longitudinal axis of the enclosed passageway; and

wherein the apparatus is operably configured to: (a) force ~~direct substantially all~~ of the bitumen froth and the steam through the ~~mixture~~ injector outlet~~[[,]]~~ into the enclosed passageway, (b) force the bitumen froth and the steam through the enclosed passageway from the first end to the second end so as to cause the steam to contact the bitumen froth so as to form the heated feed, and (c) force all of the heated feed to exit through ~~and out~~ the second end of the static mixer body, including when the enclosed passageway is disposed parallel or about parallel to the horizontal axis.

2. (Currently Amended) The apparatus of claim 1 wherein the baffles are disposed within the static mixer body to impart a lateral, radial, tangential or circumferential directional component to the bitumen froth and the steam, the directional component changing a ~~material flow through said enclosed passageway that changes repeatedly along the~~ a length of the enclosed passageway.

Application No.: 10/825,230  
Filing Date: April 16, 2004

3. (Currently Amended) The apparatus of claim 1 further comprising a steam flow control valve to control a rate of supplying the steam supply to the steam inlet from a steam source.

4. (Currently Amended) The apparatus of claim 3 further comprising a first temperature transmitter disposed to measure a temperature of material flowing through the heated feed exiting the enclosed passageway of the static mixer, wherein thereby forming a closed-loop control system of the steam flow control valve is responsive to the measured temperature of the heated feed.

5. (Currently Amended) The apparatus of claim 1 further comprising a steam flow pressure control valve to control a pressure of the steam supplied to the steam inlet from a steam source.

6. (Currently Amended) The apparatus of claim 5 further comprising a pressure transmitter disposed to measure the pressure of the steam supplied from the steam flow pressure control valve, wherein the steam flow pressure control valve is operative to maintain the steam supplied to the steam inlet at a predetermined pressure in response to the measured pressure of the steam supplied from the steam flow pressure control valve thereby forming a closed control system of the steam flow pressure control valve to maintain the pressure of the steam supplied to the steam inlet.

7. (Currently Amended) The apparatus of claim 1 further comprising:  
a condensate source and a steam source;

a condensate mixer operably configured to mix a condensate from the condensate source with the steam from the steam source for modulating a temperature of the steam supplied to the steam inlet; and

a condensate flow control valve to control a supply of the condensate to the condensate mixer.

8. (Currently Amended) The apparatus of claim 7 further comprising a second temperature transmitter disposed to measure a the temperature of a the steam supply supplied to the steam inlet and relay a representation of the measured temperature of the steam to the condensate flow control valve, wherein the condensate flow control valve is operative thereby forming a closed-loop control system of the condensate flow control valve to control the supply

**Application No.:** 10/825,230  
**Filing Date:** April 16, 2004

of the condensate to the steam supply supplied to the steam inlet ~~responsive to the measured temperature.~~

9-24. (Cancelled)

25. (Currently Amended) The apparatus of claim 1 ~~further comprising a steam source operably configured to deliver steam to the steam inlet at about 90 psi wherein the steam supplied to the steam inlet comprises saturated steam.~~

26. (Currently Amended) The apparatus of claim 3 ~~further comprising a steam source operably configured to deliver steam to the steam flow control valve at about 25 wherein the steam supplied to the steam inlet has a temperature of about 300°F and a pressure of about 90 psi.~~

27. (Currently Amended) The apparatus of claim 5 25 wherein the steam flow pressure control valve is operably configured to deliver steam to the steam inlet at about 90 psi heated feed has a substantially uniform temperature.

28. (Currently Amended) The apparatus of claim 9 27 wherein the steam pressure flow control valve is operably configured to deliver steam to the steam inlet at about 90 psi substantially uniform temperature is about 190°F.

29. (Canceled)

30. (Canceled)

31. (New) Apparatus for heating a bitumen froth by steam, the apparatus comprising:  
an injector body comprising walls defining a chamber of the injector body, a first injector inlet for introducing the bitumen froth having a bitumen froth flow into the chamber, a second injector inlet for introducing the steam having a steam flow into the chamber, and an injector outlet, wherein the second injector inlet is configured for introducing steam; and

a static mixer body comprising:

a mixer inlet and a mixer outlet, the static mixer body forming an enclosed passageway extending between the mixer inlet and the mixer outlet, the mixer inlet being in fluid communication with the injector outlet for receiving the bitumen froth and the steam; and

mixing means for mixing the bitumen froth and the steam flowing through the enclosed passageway of the static mixer body to form a heated feed;

wherein the injector body and the static mixer body are operably configured to: (a) force the bitumen froth and the steam through the enclosed passageway from the mixer inlet to the mixer outlet so as to cause the steam to contact the bitumen froth and form the heated feed, and (b) force all of the heated feed to exit through the mixer outlet, including when the enclosed passageway is disposed parallel or about parallel to the horizontal axis.

32. (New) The apparatus of claim 31 wherein the mixing means impart a lateral, radial, tangential or circumferential directional component to the bitumen froth and the steam, the directional component changing repeatedly along a length of the enclosed passageway.

33. (New) The apparatus of claim 31 wherein the mixing means comprises a plurality of static mixer barriers forming partial walls disposed within the enclosed passageway.

34. (New) The apparatus of claim 33 wherein the steam injected by the second injector inlet has a temperature of about 300°F to about 500°F and a pressure of about 90 to 150 psi.

35. (New) The apparatus of claim 33 wherein the heated feed produced by the static mixer body has a temperature of about 190°F.

36. (New) The apparatus of claim 31 further comprising a steam flow control valve to control a rate of the steam flow into the chamber and a first temperature transmitter disposed to measure a temperature of the heated feed exiting the static mixer body, wherein the injector body, the static mixer body, the steam flow control valve and the first temperature transmitter form a first closed loop control system, the steam flow control valve being responsive to the measured temperature of the heated feed by the first temperature transmitter.

37. (New) The apparatus of claim 36 further comprising a steam flow pressure control valve to control a pressure of the steam flow into the chamber and a pressure transmitter disposed to measure the pressure of the steam flow from the pressure control valve, wherein the injector body, the static mixer body, the steam flow control valve, the temperature transmitter, the steam flow pressure control valve and the pressure transmitter form a second closed loop control system, the steam flow pressure control valve being responsive to the measured pressure.

**Application No.:** 10/825,230  
**Filing Date:** April 16, 2004

38. (New) The apparatus of claim 37 further comprising a condensate flow control valve to control the supply of a condensate to the steam for modulating the temperature of the steam for injecting by the second injector inlet and a second temperature transmitter disposed to measure the temperature of the steam supplied to the second injector inlet, wherein the injector body, the static mixer body, the steam flow control valve, the first temperature transmitter, the steam flow pressure control valve, the pressure transmitter, the condensate flow control valve, and the second temperature transmitter form a third closed loop control system, the condensate flow control valve being responsive to the temperature of the steam measured by the second temperature transmitter.

39. (New) The apparatus of claim 31 wherein the mixing means comprises a baffle disposed across the enclosed passageway.

40. (New) The apparatus of claim 31 wherein the steam supplied to the second injector inlet comprises saturated steam.



**Application No.:** 10/825,230  
**Filing Date:** April 16, 2004

### **REMARKS**

Claims 1-8 and 25-28 have been amended and new Claims 31-40 have been added. Support for these amendments and the new claims can be found throughout the specification. No new matter has been added thereby. Claims 9-13 and 29-30 have been canceled without prejudice to Applicants' right to pursue these claims at a later date or in a continuation, continuation-in-part or divisional application. Claims 14-24 were previously canceled. Accordingly, Claims 1-8, 25-28 and 31-40 are presently pending. Claims 1 and 31 are independent claims.

Applicants thank the Examiner for withdrawing the finality of the previous Office Action and for finding Applicants' arguments regarding U.S. Patent No. 3,998,702 to Opoku ("Opoku") somewhat persuasive in light of previously presented Claims 1-13 and 25-30.

#### **35 U.S.C. § 103(a): Claims 1-13 and 25-30**

The Examiner rejected claims 1-13 and 25-30 under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,800,116 to Stevens *et al.* ("Stevens *et al.*") in further view of Opoku.

#### **Preclusion of Use of Stevens *et al.* as Prior Art**

The Examiner cited Stevens *et al.* as a prior art reference under 35 U.S.C. § 103(a). Applicants submit that, under 35 U.S.C. § 103(c), Stevens *et al.* cannot properly be cited as a prior art reference to preclude patentability of the present application. Section 103(c)(1) provides:

Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person.

The assignment of U.S. Patent Application No. 10/196,942 ("the '942 application"), which ultimately issued as the Stevens *et al.* patent, was recorded with the U.S. Patent and Trademark Office on July 18, 2002 and assigned the '942 application to the present application's assignee, Suncor Energy Inc. See Reel 013115, Frame 0375. The present application was filed on April

**Application No.:** 10/825,230  
**Filing Date:** April 16, 2004

16, 2004 and claims priority to Canadian Patent Application No. 2,455,011, filed on January 9, 2004.

The Stevens *et al.* patent issued on October 5, 2004. The '942 application was published on January 22, 2004 as U.S. Patent Application Publication No. 2004/0011201. Since the '942 application was first published after the earliest claimed priority date of the present application, it does not qualify as prior art under 35 U.S.C. §§ 102(a) or 102(b). Thus the '942 application, and the Stevens *et al.* patent that issued therefrom, only qualifies as prior art under 35 U.S.C. § 102(e). Since Section 103(c) provides that subject matter developed by another person qualifying as prior art only under Section 102(e) does not preclude patentability under Section 103 if the subject matter and the claimed invention were owned by the same person or subject to an obligation of assignment to the same person at the time the claimed invention was made, Stevens *et al.* cannot properly be cited by the Examiner as a prior art reference to preclude patentability of the present invention under Section 103(a). Applicants therefore request that the Examiner withdraw the rejection based on Stevens *et al.*

#### Opoku

The Examiner's rejections of Claims 1-13 and 25-30 under 35 U.S.C. § 103(a) are overcome by the arguments above regarding Stevens *et al.* standing alone. However, Applicants nonetheless wish to further clarify some of the differences between Opoku and amended Claim 1.

Opoku discloses a deaerating conduit 14, where the lower or bottom zone of the conduit has steam injection means 34 which can be one or more pipes having a plurality of openings or nozzles 37 disposed over the upper surface thereof. *See* col. 3, lines 37-47. Opoku further discloses a novel launder 43 and a plurality of steam injection means 46 along the bottom which communicate with steam conduit 48 via inlet means 45. *See* col. 4, lines 25-37. Opoku also discloses that steam added to the bituminous froth is allowed to escape from the deaerating conduit 14. For example, Figure 2 includes "exit means 33 which permits steam and air to separately vent from the conduit." *See* col. 3, lines 45-47. In addition, the apparatus disclosed in Opoku is gravity-based. *See, e.g.,* col. 3, lines 3-4; col. 3, lines 10-12; col. 5, lines 20-23.

By contrast, Applicants' apparatus forces both the bitumen froth and the steam through an enclosed passageway under pressure to form a heated feed, as claimed in amended Claim 1.

**Application No.:** 10/825,230  
**Filing Date:** April 16, 2004

Unlike Opoku, Applicants' apparatus does not employ a gravity-based system open to the air that allows steam to escape thereinto.

#### Dependent Claims

Claims 2-8 and 25-28 all depend directly or indirectly upon independent Claim 1. For the reasons explained above, Stevens *et al.* and Opoku also cannot properly be combined to render these claims obvious.

Claims 9-13 and 29-30 have been canceled, and thus rejection of these claims is now moot.

#### No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicants are not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicants have made any disclaimers or disavowals of any subject matter supported by the present application.

#### **CONCLUSION**

In view of the foregoing, the present application is believed to be fully in condition for allowance. However, should any remaining impediments to allowance be identified by the Examiner, the Examiner is respectfully invited to contact the undersigned attorney at the telephone number appearing below.

Because December 20, 2008 was a Saturday, this response is timely submitted with a three-month extension fee. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

**Application No.:** 10/825,230  
**Filing Date:** April 16, 2004

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 12/22/08

By: Umair Qadeer

Umair A. Qadeer  
Registration No. 54,380  
Attorney of Record  
Customer No. 20995  
(949) 760-0404

5693682  
072308

## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	10825230			
<b>Filing Date:</b>	16-Apr-2004			
<b>Title of Invention:</b>	Bituminous froth inline steam injection processing			
<b>First Named Inventor/Applicant Name:</b>	Les Gaston			
<b>Filer:</b>	Umair A. Qadeer			
<b>Attorney Docket Number:</b>	83743-16			
Filed as Large Entity				
<b>Utility under 35 USC 111(a) Filing Fees</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				
Extension - 3 months with \$0 paid	1253	1	1110	1110

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>1110</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	4507739
<b>Application Number:</b>	10825230
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	7777
<b>Title of Invention:</b>	Bituminous froth inline steam injection processing
<b>First Named Inventor/Applicant Name:</b>	Les Gaston
<b>Correspondence Address:</b>	KNOBBE MARTENS OLSON & BEAR LLP - 2040 Main Street, 14th Floor - Irvine CA 92614 US - -
<b>Filer:</b>	Umair A. Qadeer
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	83743-16
<b>Receipt Date:</b>	22-DEC-2008
<b>Filing Date:</b>	16-APR-2004
<b>Time Stamp:</b>	22:13:00
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$1110

RAM confirmation Number	6557
Deposit Account	
Authorized User	

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Response.pdf	1120712 3a2ee7287993d2c1ac50eeefda42785223b90b4	yes	10
<b>Multipart Description/PDF files in .zip description</b>					
	<b>Document Description</b>		<b>Start</b>		<b>End</b>
	Amendment/Req. Reconsideration-After Non-Final Reject		1		1
	Claims		2		6
	Applicant Arguments/Remarks Made in an Amendment		7		10

### Warnings:

The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing

### Information:

2	Fee Worksheet (PTO-06)	fee-info.pdf	29760 2773e1f1ffb36958acfa94740e6baa2eb1770c2	no	2
---	------------------------	--------------	--	----	---

### Warnings:

### Information:

<b>Total Files Size (in bytes):</b>	1150472
-------------------------------------	---------

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

### New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.